X

PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN

AJMERE

FOR

1877-78,

WITH THE ORDERS OF THE GOVERNMENT OF INDIA.

CALCUTTA:
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No. 438 F., dated Simla, the 23rd May 1879.

From—A. O. HUME, Esq., C.B., Secretary to the Government of India, Department of Revenue, Agriculture and Commerce,

To—The Chief Commissioner of Ajmere.

I AM directed to acknowledge the receipt of your Secretary's letter No. 3138., dated the 17th February last, submitting the Report of Forest Administration by the Commissioner of Ajmere for 1877-78, and to express a hope that the Report will be submitted more punctually in future.

2. The area of the State Forests taken up under the Regulation is stated by the Commissioner in paragraph 3 of his Report to aggregate 64,428 acres according to the Settlement and Forest Surveys, and 59,256 acres according to the Topographical Survey. As the Topographical Survey, however, gives no detailed measurement for each village and for each share thereof, the discrepancies cannot be explained without a fresh survey; and as the Commissioner finds it more convenient to use these figures, which it is presumed accord with those of the Settlement records, the area will for the present be recorded as 64,428 acres, although it probably is less.

It must be noticed here that the areas entered in Statement No. 45 appended to the Commissioner's Report do not agree with those stated in the body of the report, for the statement shows—

In Ajmere	...	...	...	11,174 acres.
„ Mhairwarra	...	...	...	52,945 „
Total	...	...	...	64,119 „

The difference, 309 acres, is entered in the statement of plantations. These plantations, however, are included in the areas taken up under the Regulation, and in future Reports their area should not be excluded from Statement No. 45.

3. The boundaries of the tracts reserved are reported to be in good order, and of a total length of boundary lines of 968,860 feet, or 183 miles, 355,067 feet, or 67 miles, are reported to have been fenced partly by stone walls and partly by hedges of the *Euphorbia* bush. This is satisfactory.

4. In 1876-77 only 20 cases of breaches of the forest rules were reported. In the year under notice, there have been 132 cases, of which 124 led to the conviction of the offenders. This the Commissioner ascribes to the great drought and to the scarcity of fodder.

5. 44,686 acres were protected from fire, and there were no failures in the areas attempted to be protected. The total outlay on this account from the commencement was Rs. 2,193, of which Rs. 218 were expended during the year under notice. As the growth in the protected areas gets thicker, the risk from fire during the dry season will probably increase for some years to come, and the greatest vigilance will be needed to guard against fire. The Governor General in Council trusts that no pains will be spared to keep out fires from the reserves.

6. In paragraph 45 of his Report, the Commissioner reports the result of the sowing of bamboo seed, and adds that a liberal supply of bamboo seed would be much appreciated. I am directed to state that it rests with the Commissioner to apply to the Conservators of Forests in the North-Western Provinces and the Central Provinces for supplies of seed of the two species mentioned by him.

7. The Commissioner's remarks in paragraphs 36 and 50 of his Report, regarding the results that have attended the conservation of the demarcated areas, have been read with interest, and especially Mr. Saunders' remark that the endeavours made have resulted in an incalculable boon to the country, and that the people are gradually coming to recognize the growing importance of the valuable reserves of grass and firewood which now occupy the former bleak and barren waste.

8. There has been some increase in the revenue realised from these areas, the figures being as follows:—

	Rs
Receipts	3,002
Charges	14,926
Excess charges ...	11,924

In paragraph 9 of his note, Mr. Crommelin brings to notice that the revenue realised from the Nagpahar, Mhowa Bir, and Madar hill tracts is credited to the Nazul Fund, and suggests that this revenue be in future credited to the Imperial revenue under "Forests," because large sums from Imperial Funds have been and are being devoted to the conservancy and re-foresting of the tracts in question. The suggestion seems appropriate, and I am directed to request an expression of your views on the subject. It will be convenient if, in future, when submitting the Annual Report on Forest Administration in Ajmere, you will favour the Government of India with an expression of your own views on any matters of importance reported therein.

Govt. Central Branch Press, Simla.—No. 74, R., A. & C.—24-7-19—350.

No. 3138., dated the 17th February 1879.

From—The Secretary to the Governor General's Agent and Chief Commr., Rajputana,
To—The Secretary to the Government of India.

I am directed by the Chief Commissioner to submit the Annual Forest Progress Report of Ajmere and Mhairwarra for the year 1877-78, accompanied by an office note thereon, and to state that, in the opinion of Major Bradford, the progress made during the year appears to be satisfactory.

Note by the Secretary to the Governor General's Agent and Chief Commissioner, Rajputana, on the Report on the Forest Administration of Ajmere for the year 1877-1878.

The report is late in submission, having been submitted only this month instead of August last when it became due, and it would appear necessary that the Commissioner and Conservator's attention should be drawn to the delay, of which the report affords no explanation.

2. During the year 1877-78, the actual areas of the several tracts remained unaltered, but a few corrections were carried out in the record of the same. The Commissioner and Conservator's opinion, with regard to the areas, is that those obtained from the settlement surveys should be accepted as correct wherever the result of the topographical survey is found to differ materially. This would appear to be the only way out of the difficulty unless fresh surveys be undertaken. The total area of reserved forest in the Ajmere and Mhairwarra districts is 100 square miles and 119 acres, besides 309 acres of plantation and nurseries measuring 53 acres.

3. Demarcation and fencing to the extent sanctioned in the general estimates has been completed, and, so far as the already reserved tracts are concerned, the future expenditure will be chiefly on repairs. The total length of boundaries is a little over 183 miles, and the aggregate length of portions fenced is about 67 miles. In only one case, *viz.*, Biliawas and Tarragarh tract in Mhairwarra, there appears a complete absence of fencing. The three large Mhairwarra tracts noted in the margin have been fenced only at very important points, and the boundaries fenced are only one-twentyfifth to one-tenth of the entire boundary lines of the tracts.

Barakhan and Todgarh, Borwar and Kotra, Anspahar.

4. The fencing executed during the year 1877-78 was about 1,132 chains and cost Rs. 2,470, or about Rs. 2-4 per 100 feet chain. The remarks in paragraph 10 of the report raise the question as to which is the best description of fencing. The *Euphorbia* hedge, used pretty extensively in Ajmere and Mhairwarra, is found to need constant repairs. This matter has probably attracted a notice from Mr. Brandis and Mr. McA. Moir in their recent joint inspection of the forest reserves, and until their views are known, no further remarks seem to be called for.

5. Sketch maps showing the boundaries of the reserved forests and the fencing executed have been prepared and will accompany the report.

6. The plantations measuring 309 acres are mostly in a state of infancy, and they cannot be expected to yield anything beyond a trifle for some years to come. The nurseries having been chiefly maintained in connection with the plantations, a large portion of the expenditure incurred thereon must be charged to the plantations concerned, and this might be conveniently done by charging so much per plant supplied. Unless this be done, the outlay on the plantations will not correspond to the actual charges. The number of trees watered during the hot months was 9,643, of which 5,193 belonged to Ajmere plantations and the rest to the Mhairwarra. The watering establishment at its

full strength costs about Rs. 111 per mensem, and the rate per tree averages between 1 to 2 annas per annum. Total expenditure on plantations amounted to Rs. 1,782, and on nurseries Rs. 1,006. As per summary of expenditure, the total expenditure stands, however, at Rs. 2,929. This shews a small discrepancy. The average cost of maintaining the plantations in their present condition amounts to Rs. 5 per acre: thus the total maintenance charges were Rs. 1,539 for an area of 309 acres, as per paragraph 19 of the report. The number of trees watered per acre would appear to be about 30, and the number of those established and carried beyond the need of watering may be roughly taken at 20 to 50. At this rate, the cost of rearing each tree to the stage at which it can take care of itself was on the average a little below Re. 1. If, however, babul and such other indigenous trees as are found to thrive well under natural conditions were only planted, the cost would be much less. After unsuccessful experiments with mangoes and other species of more valuable trees, the Commissioner and Conservator seems now to lean towards the opinion that we must hope for more success from the growth of hardier species than those requiring good soil, plentiful irrigation, and a good deal of care to save them from frost.

Annual form No 46.

7. The report does not state what measure of success has attended the efforts made to grow Bombay and other kinds of mangoes in the several plantations. Probably, the whole subject will be found fully discussed by the Inspector General of Forests in his report on the reserves, and needs no further notice at present.

8. The forecast of forest operations sanctioned for the five years, 1875-76 to 1879-80, has been carefully worked up to. Its preparation proved an undoubted advantage, for it has secured a regular plan of working and excluded the possibility of large amounts being expended on plantation experiments without the sanction of the Chief Commissioner. The limit enforced by the detailed general estimates leads to economy and enables the controlling authority to exercise a proper check. The preparation of a second forecast must await the orders of the Government of India on the results of the late inspection of the forest tracts.

9. The past year put to test the usefulness of the reserved areas as a resource against drought and consequent scarcity of fodder and grass. The results obtained from the Srinagar, Nagpahar, and Mhowa Bir and Madar hill tracts appear to be very encouraging. The grass in all the three tracts went to supply the wants of the Ajmere city chiefly. The sum realised on account of the Srinagar tract is Rs. 1,210, its area being about 3,600 acres. The lower slopes of the hill ranges and immediate plains are open to grazing except during monsoons, while the higher areas, owing to the steep ascent, are destitute of all vegetation. The above financial result must, therefore, relate to a limited area and appears to be satisfactory. The sale proceeds of grass from the Nagpahar tract (area 2,679 acres) amounted to Rs. 1,500. This tract as well as the Mhowa Bir and Madar hill tracts are treated as Nazúl property, and receipts are carried to the credit of the Nazúl Fund, as stated in paragraph 37 of the report. Considering that large sums from imperial funds have been and are being devoted to the conservancy and re-foresting of the tracts in question, it would appear unfair to the Forest Department that it should get no credit for the results of improvements effected through its agency. As in the case of the village lands, those having a proprietary interest therein are only admitted to a share of the net profit; so also the Nazúl Fund should participate only in the net receipts. The lands were made over to the Nazúl Fund in trust for certain local purposes. These objects do not now derive from the Nazúl Fund much help, and are carried out from the district cess collections. Therefore, there would be no harm done by Government resuming the Nazúl lands included in the two tracts and making them over to the Forest Department finally.

10. The receipts from the Mhowa Bir and Madar hill tracts on account of sale of grass have not been mentioned. The Tarragarh valley tract is open to certain rights of grass-cutting vested in the inhabitants of Ajmere, still it supplies the requirements of the departmental cattle and even more.

11. In the Mhairwarra tracts, grazing was allowed when it was found that the failure of rains had left bare the pasture lands in the possession of the

villagers. The rates recommended by the Commissioner and Conservator were—

	Rs.	A	P
Per cow or bullock	0	4	0
„ buffalo	0	8	0
„ calf of either description	0	1	0
	0	13	0

At these rates, several of the Mhairwarra villages would have had to pay as much as Rs. 100 to Rs. 300 per month had they sought grazing even for half the village cattle, and the rates were considered by the Chief Commissioner to be very high, and actually only half the rates were charged to the non-cultivating villagers, while the agriculturists paid only one-fourth of the originally proposed rates. The arrangement does not appear to have succeeded to the extent anticipated, for only about 1,000 cattle were sent to the forest reserves, and the grazing dues amounted to Rs. 67. It is explained that the grass in the reserves was found to be old and rotten, and animals would not eat it readily; but the true explanation would appear to be that "a large majority of cattle was driven away to distant grazing ground" long before the grant of grazing in the forest reserves became well known to the villagers. The quotation is from paragraph 34 of the report. The high rates originally proposed must also have reduced the number of applicants for grazing to the minimum.

There were 130 persons prosecuted for grazing cattle without permission: of these 93 committed this breach of the forest bye-laws in the Mhairwarra tracts. No better proof is required to shew how much valued the privilege would have been if it had been accorded in time and at fair rates. The rules were passed in March 1878.

12. Grass-cutting appears to have been freely allowed in the Mhairwarra tracts. In the Ajmere tracts grass-cutting is very much restricted, and probably the majority of the 257 persons prosecuted for "unauthorised felling or appropriation of wood and minor forest produce" were brought for grass-cutting.

13. The revenue receipts of the year amounted to Rs. 3,002 against Rs. 905 of the previous year. The increase is due partly to the grass sold from the Srinagar tract, and partly to the fines and forfeiture inflicted for breaches of forest rules, which latter amounted to Rs. 1,462, at nearly Rs. 4 per person convicted, their number being 353. The hard times placed great temptations in the way of those wanting grass and fodder, and consequently a large increase in prosecutions.

14. From the remarks in paragraphs 40 and 50 of the report, it will be perceived that conservancy alone has begun to bear fruit in an improved supply of grass, and that its effects on the areas reserved by us have already induced individual proprietors and thakoors in the neighbourhood to essay in that direction.

15. As regards the influence which the forest reserves might be expected to exercise on the water-supply in the tanks, nothing can be said at present. The Srinagar, Bir, and the Rajaosi tracts occupy the range of hills forming the catchment areas of Bir, Rajaosi, Srinagar, and of several other tanks, and observations might hereafter be made at some of these tanks when sufficient progress has been made in the reboisement of the tracts.

No. 120F., dated the 7th February 1879.

From—The Commissioner and Conservator of Forests, Ajmere and Mhairwarra,

To—The Secretary to the Governor General's Agent and Chief Commr., Rajputana.

I have the honour to forward, for the information and orders of the Chief Commissioner, Progress Report on Forest Administration in Ajmere and Mhairwarra for the year 1877-78.

2. *Area.*—The area of forest reserves on the 31st March 1877 was reported at 64,360 acres, the combined result of settlement, topographical, and departmental surveys. The area according to the topographical survey stands

at 59,947 acres. This includes 691 acres of cultivation at present in the possession of the proprietors, leaving 59,256. In the statements of reserve and plantations prepared in your office and submitted to the Government of India with previous year's report, the area of Delwara and Chang Birs, 281 acres, was shewn under plantations, and it is therefore not included in 64,360, but it is included in 59,256.

3. The area of forest reserves in possession of the Forest Department according to the settlement and forest surveys—stands at 64,428 acres, a difference of 5,172 acres between topographical and settlement surveys. Very material discrepancies exist in the case of three Mhairwarra tracts, *viz.*, Chang, Biliawas, and Todgarh, as shewn below :—

Name of tract.	Topographical survey.	Settlement survey.	Difference.	Cultivation.
	Acre.	Acre.	Acre.	Acre.
Chang	2,999	2,387	+ 612	46
Biliawas	5,046	3,258	+ 1,788	86
Todgarh	32,275	40,178	− 7,903	130

As there exists no detailed measurement for each village and for each share thereof, according to the topographical survey, it is difficult to explain the discrepancies, and it has therefore been decided to accept the settlement survey as correct, though it is probable that the topographical measurement is the more correct of the two; for under the settlement measurement the allowances made for slopes are less accurately defined, but the settlement measurement is the more convenient one for our purposes.

4. The area of plantations on the 31st March 1877 was shewn in the statement prepared in your office and submitted to the Government of India with previous year's report at 311 acres, at a cost of Rs. 6,960, as follows :—

Name.	Area.	Cost.
	Acres.	Rs. A. P.
Shahjahani nursery	11	808 14 11
Shikast Masjid	27	420 4 5
Bibi Chihla nursery	9	80 5 5
Beawar nursery	32	2,366 13 9
Delwara and Chang Birs	231	1,815 12 10
Ajmere main nursery	1	1,467 15 4
Total . . .	311	6,960 2 8

5. It will be seen from the above statement that the area and cost of Shahjahani and Bibi Chihla nurseries have been included. These are Nazúl gardens, and were utilised till September 1876 for rearing trees. No expenditure has been incurred on account of these gardens since the formation of a main forest nursery in Ajmere, although they are still used as subsidiary nurseries and are supervised by the Forest Department.

6. Shikast Masjid, Delwara, and Chang Birs have been treated as plantations, but they are not as yet fully stocked. The area actually covered by plantations has been included in the statement of plantations, and the rest in that of reserves.

7. In Ajmere and Mhairwarra, the forest tracts were taken up for conservancy, while in all of them experimental planting was undertaken in favourable spots. Such places might be considered plantations, and their area, about 315 acres, has accordingly been entered in the statement. The rains failed during the year under report lamentably, and no additional area was planted. The expenditure incurred during the year was on account of maintenance of trees planted in former years and on account of pits dug for further planting.

8. Of the trees planted in former years, 9,643 trees as follows were watered in the beginning of this year at a monthly cost of Rs. 111. Some of them will require watering for the next three years at least:—

	Trees.	Total.
Ajmere district.		
Mhowa Bir and Madar hill	3,121	
Nagpahar	603	
Tarragarh valleys	1,327	
Srinagar and Bir	142	
		5,193
Mhairwarra district		
Chang tract	580	
Hattun „	637	
Biliawas „	843	
Todgarh „	645	
Delwara and Chang Birs	745	
Beawar plantation	1,000	
		4,450
Total		9,643

9. Of the 315 acres entered in the statement of plantations, 309 acres belong to the 64,428 acres taken up under the regulation, and 6 acres is the area of Shikast Masjid. This patch belongs to the Nazúl Fund; it is at present in charge of the Forest Department and is used as a plantation. The area, therefore, in possession of the Forest Department stands as follows:—

	Acres.
Area of reserves	64,119
„ plantations	315
Total	64,434

10. All the forest reserves in Ajmere and Mhairwarra have been completely demarcated, and along those portions of the boundary line where they are much exposed to the inroads of cattle they have been fenced. The fencing, however, wherever it has been constructed of *Euphorbia* bush, is in need of constant repairs, and it is probable that a rubble wall would be found everywhere more economical in the long run, as *Euphorbia* bush will not flourish in the shade. Across nullahs wire fencing in stone pillars should be erected, as neither stone walls or *Euphorbia* will answer permanently in such places. The first cost would be greater, but such fencing would be more effective and permanent. The following statement will shew the total length of each tract and the length of fencing:—

Name of tract.	Total length of boundaries.	Length of fencing done.
	Acres.	Acres.
Mhowa and Madar hill	86,022	65,414
Nagpahar tract	69,595	42,617
Tarragarh valleys, Ajmere,	57,100	1,719
Rajaosi tract	36,586	33,100
Srinagar and Bir	96,589	44,700
Chang tract	53,594	23,104
Hattun and Sheopura	78,607	59,271
Biliawas and Tarragarh	75,476	.
Barakhan and Todgarh	2,05,350	28,190
Borwar and Kotra	90,609	11,859
Anspahar	76,127	3,300
Delwara and Chang Birs	43,205	41,793
Total	9,68,860	3,55,067

11. These figures do not agree with those given in paragraph 14 of this office No. 35F., dated the 17th June 1878. The figures then given were the result of measurements made by jemadars, while in the present case the measurements were made by the Forest officers and are considered more reliable.

12. The Government of India notice in their No. 1495F., dated the 31st October 1877, that the total length of fencing to be made and of that completed was reported as 40½ miles and 30⅘ miles respectively. In the statement forwarded under cover of this office No. 265, dated the 4th November 1876, the total length proposed to be fenced was reported at 3,255 chains of 100 feet = 61⅔ miles, of which 38¼ miles were completed up to the 30th September 1876. The calculation seems to have been founded on the assumption that the chain used was the 66 feet chain, whereas the 100 feet chain was really used in making these measurements.

13. *Work done during 1877-78.*—The following foot-paths were put in proper order :—

	Rs.	A.	P.
Tarragarh valleys, Ajmere	23	3	0
Nagpahar tract	22	9	0
Todgarh „	174	7	6
Total cost	220	3	6

This expenditure was absolutely necessary to ensure inspection of forest tracts.

14. *Buildings.*—The cost of construction and repairs of buildings has been as follows :—

	Rs.	Rs.
Construction.		
Mhowa Bir and Madar hill	110	
Rajaosi	150	
Anspahar	98	
Borwar and Kotra	79	
		437
Repairs.		
Nagpahar	175	
Tarragarh valleys, Ajmere	35	
Srinagar and Bir tract	25	
Petty repairs to buildings in other tracts	64	
		299
Total		736

15. In Madar hill tract a new chowki was constructed and an old hut put into thorough repair at a cost of Rs. 110. The roof and walls of the Nagpahar bungalow were injured by a storm, and an expenditure of Rs. 175 had to be incurred in repairs.

16. The chowkis in Tarragarh valleys and Srinagar-Bir tract had tiled roofs, and as such were subject to damage by monkeys, &c., they were ordered to be constructed of slabs in masonry. The work was commenced in the latter part of the year 1877-78 and completed in 1878.

17. In the Rajaosi tract, Ajmere, two chowkis of lime masonry have been completed at a cost of Rs. 150; also two suitable huts were built in the Anspahar tract, Mhairwarra.

18. In the Borwar and Kotra tract it was originally intended to erect one chowki only. The relinquishment of an intermediate strip of land having been found desirable, two tracts or portions of tracts were formed and a watcher's hut in each was found necessary.

19. *Plantations.*—The trees planted in former years in the various tracts were maintained at a cost of Rs. 1,539 as detailed below :—

	Rs.	Rs.
Ajmere district.		
Tarragarh valleys	431	
Mhowa and Madar hill	190	
Nagpahar	336	
Srinagar	101	
Shikast Masjid	66	
		1,124
Mhairwarra district.		
Chang tract	84	
Hattun „	84	
Biliawas „	72	
Todgarh „	101	
Delwara and Chang Birs	74	
		415
Total		1,539

20. The rains of 1878-79 have been favourable, and many trees may now be left to themselves. A large number of trees have been put out during the last rains and are being maintained without any extra cost.

21. As opportunity offers, it is intended to plough up any small plots of land which may be available and to sow babul seed in drills. This plan was adopted by Mr. Moir, and the results of his operations in this respect are not discouraging. In the Todgarh tract in five or six valleys there are young babul trees from 4 to 10 feet high coming on very promisingly, notwithstanding the drought already noticed.

22. A number of pits were dug and filled with good earth during 1877-78 in the following tracts :—

	Number.	Rs.
Mhowa and Madar hill	880	115
Tarragarh valleys	115	13
Srinagar and Bir	267	52
Rajaosi tract	300	42
Chang „	150	21
Todgarh „	400	40
Total	2,062	283

These pits could not be planted in 1877-78 owing to failure of rains, and were, therefore, planted in the rains of 1878. The pits dug in the Rajaosi tract were, however, not planted, as the Assistant Commissioner, Ajmere, considers that planting will not be successful, commensurately with cost incurred, till such time as a certain covering of natural scrub may have been produced.

23. Owing to the failure of rains, the wells in the Beawar, Ajmere, and Todgarh nursery failed, and it became necessary to spend Rs. 262 in sinking them deeper. A new well in the Barinal portion of the Tarragarh valleys was dug at a cost of Rs. 88-12. The nurseries contained a large number of young trees in the commencement of 1878. Many of these trees were planted out during last rains and the nurseries filled up with fresh seedlings. The following trees were also distributed from the nurseries to applicants, &c.,—

Forest trees	3,426	gratis.
Fruit „	783	on payment.
Flower „	146	ditto.
Total	4,355	

24. A sum of Rs. 2,470 was spent on the construction of fencing as detailed below :—

	Feet.	Rs.
Ajmere district.		
Mhowa Bir and Madar hill	46,426	1,087
Rajaosi tract	18,502	199
Nagpahar	13,472	183
Srinagar tract	22,401	623
Mhairwarra district.		
Borwar and Kotra tract	9,810	300
Anspahar tract	2,570	78
Total	113,181	2,470

25. Rubble stone walling was constructed wherever stone was plentiful, and in other places *Euphorbia* hedges were made. Besides the above fencing, repairs were executed to the fences of Hattun, Delwara, and Chang Birs at a cost of about Rs. 51.

26. *Fire protection.*—The usual precautions against fire in the Biliawas and Todgarh tracts, Mhairwarra, were taken, and six extra watchers were entertained. The precautions taken have so far been found effective. No fires have occurred since 1876. The cost of this protection during 1877-78 was—

	Rs	A.	P.
Todgarh tract	163	8	0
Bihawas „	33	10	0
Anspahar „	32	10	0

27. *Protective establishment.*—The cost of the protective establishment stands at—

	Rs.
Ajmere district	1,232
Mhairwarra „	1,766
Total	2,998

Besides the Rs. 2,998, Rs. 285 was incurred on account of cost of general establishment on account of both districts.

28. The avenues formerly planted on district roads have been carefully maintained and are doing well. The cost of maintenance is borne by the district funds, and during the year under report has been as follows:—

	Rs.
(1). Srinagar road	191
(2). Pokar „	92
(3). Jawaja „	291
(4). Circular „	80
Total	654

Owing to failure of rains, the watering establishment had to be maintained all the year round, otherwise the expenditure would have been much lower. Considering the drought, however, the expenditure is not excessive. Trees on roads Nos. 1, 2, and 3 will, it is hoped, be able to do without water after the ensuing rains, while those on No. 4 will require attention for a longer period.

29. Three hundred and fifty-six trees of sorts were planted on the Malpua road in the town of Ajmere. These trees are in a flourishing state; the cost is met from municipal funds.

30. Two hundred trees were planted on the site of the Pokar fair. The soil below the drift sand is of good quality, but in many places the drift sand is very deep. The cost of digging pits, fencing, and planting trees amounted to Rs. 470-9 and was met from the Nazúl Fund.

Financial results.

31. *Receipts.*—The question of taking steps to increase the Forest revenue claims attention, but the matter must be dealt with cautiously. Felling can only be allowed under close supervision, and it would perhaps be rash to attempt any such measures in the absence of professional advice. There can be no doubt however that some of the forest tracts (notably Todgarh tract) already contain valuable supplies of firewood, and these should eventually bring in considerable receipts.

32. The receipts during the year 1876-77 amounted to only Rs. 905, while that in the year under report stands at Rs. 3,002. The increase is due to larger receipts from the sale of grass and from fines.

33. A sum of Rs. 1,210-13-11 was realised from the sale of grass in the Srinagar tract and credited to the account of the tract at the request of the Srinagar zemindars, who at last have, by the drought of the year under report, been fully instructed in the value of conservation. The central portion of this tract over which grazing is allowed for certain months cannot be considered as under forest conservation at all. As a grass reserve it is of inestimable value, and for this reason alone deserves to be retained within the forest boundaries.

34. The past year was one of great drought and scarcity, particularly of fodder. A large majority of cattle were driven away to distant grazing grounds, but still the temptation to evade the forest laws was great: hence the prosecutions were more numerous and the income from fines larger than in former years: it amounted to Rs. 1,446.

35. Of the 468 persons prosecuted, 353 were convicted: 281 persons were prosecuted for felling wood and *Euphorbia* and cutting grass, 130 for grazing without permission, and 57 for other offences. Most of the cases occurred in Ajmere, comparatively few in Mhairwarra.

36. We may, I think, accept as an undoubted fact that the endeavours hitherto made for the reboisement of the almost wholly denuded hills of Ajmere and Mhairwarra have resulted in an incalculable boon to the country at large. The general dissatisfaction which prevailed when protection was first started has now toned down, and the people are gradually coming to recognise the growing importance of the valuable reserves of grass and firewood which now occupy the former bleak and barren waste.

37. The grass on the Nagpahar was sold for Rs. 1,500 to the Ajmere Municipality. The grass on the Mhowa hills was sold to the Chanda Fund and to some few individuals, or kept for the consumption of the Nazúl garden bullocks; this income is credited to the Nazúl Fund. It seems to me that a certain charge for supervision should be made, and such amount deducted and credited to Forest revenues.

38. With the experience which an attempt to burn charcoal with imperfect supervision afforded, it was considered undesirable to undertake any more such operations for the present; consequently Rs. 1,000 entered in the regular estimate was not obtained. The account of the charcoal burnt stands as follows:—

Receipts.

	Rs.
Credited in accounts, 1877-78	157
" " 1878-79	200
Quantity in stock	193
Total	550

Expenditure.

Accounts, 1876-77	50
" 1877-78	136
" 1878-79	5
Amounts forfeited	48
Total	239
Net profit to Government	311

39. *Expenditure.*—The expenditure during 1876-77 amounted to Rs. 22,458. The sanctioned estimate for 1877-78 was Rs. 17,000, while the expenditure for the same year stands at Rs. 14,926, giving a net saving of Rs. 2,074. The expenditure may be divided under three heads, *viz.*, expenditure in—

	Rs.
Mhairwarra tracts	4,206
Ajmere "	5,894
General "	5,065
Total	15,165

This sum includes Rs. 239, price of seeds purchased in former years which were sown during 1877-78 and their price debited to the various tracts.

40. *Court of Wards.*—The Jethgarh hill (Pisangan estate) is making fair progress; its grass and *pala* have been very valuable in a season like this. The Birs of Shoukla and Goela, now no longer under the care of the Sub-Assistant Conservator of Forests, are being kept up and looked after by the Court of Wards. The Shoukla Bir is not a success, the site being too high and exposed; but the Goela Bir is doing well, and the sale of its grass has kept this impoverished little estate out of actual embarrassment. Conservancy operations are being carried on by the Court of Wards at Junian, Karonj, and Kaibania.

41. *Nazúl gardens.*—The revenue from these gardens and rakhs under the charge of the Forest Department amounted during the year to Rs. 4,568 and the expenditure to Rs. 1,357.

SPECIAL REMARKS ABOUT TREES.

42. *Eucalyptus.*—In Ajmere the seeds germinated in some places; they were sown on two occasions as per margin. The first sowing failed entirely, but the second sowing was successful. Some of the *Eucalyptus* sown in Mr. Moir's time is flourishing in

Dated 28th May 1877.
" 30th " "

the Barinal, but it is not known of what sort it is. The experiment as regards Mhairwarra was a failure. The site selected was possibly too damp, but the main reason for the unsatisfactory result was that the character of the plant and the conditions under which it should be reared were not at first known. Some information was subsequently obtained, but too late to be of much practical use.

43. *Sorgho seed.*—The sorgho seed was sown in Municipal gardens and most of it germinated. The stalks, however, did not grow so high, nor were the heads nearly so large as the common jowar of the country.

44. *Mesquit beans.*—The seeds were sown in nurseries during May and June; they germinated almost everywhere fairly well. None of the young plants have yet been put out.

45. *Bamboo seeds.*—*Dendrocalamus strictus* and *Bambusa arundinacea* were sown in some of the Nazúl gardens, and a fair proportion of the seed germinated. A liberal supply of bamboo seed would be much appreciated.

46. *Carob.*—A number of young carob trees raised from seed have been planted out and seem to be doing well. During the present year 250 plants have been received from Saharanpur,—half sent to Mhairwarra jungles and half put out in the Barinal valley,—which appears a most promising site. The growth of the plants is very slow. Those in the Beawar nursery are, however, reported to be doing well. It would conduce materially to the success of these experiments were complete information furnished with each description of seed sent.

47. In paragraph 9 of Government of India letter No. 1497F., dated the 31st October 1877, the hope is expressed that, by strict protection of the hills, it may be possible to "regulate and improve the water-supply in the tanks situated below the reserves," and the question whether the sphere of our forest operations should be extended is reserved for future consideration, when a more extended experience in management has been secured and the benefits derivable from conservancy have been carefully observed. His Excellency in Council trusted, however, that private proprietors would be led to follow the example set them by Government.

48. No observations have as yet been taken to test the extent to which moisture has been retained in the hills, or whether the water-level of the district has been affected or not. Such experiment, if the results obtained are to be reliable, must be spread over a term of years and embrace somewhat extended tracts. It is obviously beyond the scope of the present report to discuss this important theory at any length; but it may be mentioned that some of the protected tracts have now reached a stage at which a commencement of the necessary observations may be made.

49. The visit of the Inspector General of Forests to Ajmere and Mhairwarra will probably bring up for discussion the propriety or otherwise of extending our present area of forest operations.

50. There are, I am glad to say, signs that the cultivators are themselves beginning to appreciate the effects of conservancy. It is not now uncommon to see in a village small patches of the waste protected, especially in close proximity to fields. The Rajas of Bhinae and Sawar and the Rao of Masuda have each of them set apart certain hills and tracts for conservation, and in many places I have heard remarks made on the benefits felt last year in the wards' estates by the steps we took in setting aside special plots for conservation. I am not, however, sanguine enough to believe that these individual efforts, directed chiefly towards securing handy supplies of grass and for purposes of sport, will develop into systematic and remunerative conservancy on an appreciable scale till a beginning has undoubtedly been made, and every encouragement should be given to the movement.

51. Rules for grazing cattle in the Mhairwarra district were sanctioned by the Chief Commissioner, and the following scale of charges was fixed :—

	Per mensem.		
	Rs	A.	P
Per cow or bullock	0	4	0
„ buffalo	0	8	0
„ calf of either description	0	1	0

These rates were, however, found to be high and were subsequently reduced.

The following statement will shew the number of cattle admitted and the amounts realised :—

	Rs.	A.	P.
57 buffaloes, at 2 annas	7	2	0
18 „ at 4 „	4	8	0
13 bullocks, at 1 anna	0	13	0
38 „ at 2 annas	4	12	0
666 cows, at 1 anna	41	10	0
45 „ at 2 annas	5	10	0
118 calves, at 3 pies	1	13	6
9 „ at 6 „	0	4	6
1 horse	0	8	0
Total	67	1	0

The zemindars did not avail themselves of the privilege accorded them to the extent anticipated. It was found that most of the grass in the jungles was old and rotten, and animals would not eat it readily. The hard time was, therefore tided over with bran and straw. A considerable amount of grass was however, cut in the Todgarh tract, and it is hoped that the owners of cattle will gradually learn to appreciate the economy of cutting grass and stall-feeding their animals.

Form No. 45.

FOREST DEPARTMENT, AJMERE AND MHAIRWARRA.

Area of Reserved forests, 1877-78.

Division or range.	Name of forest, and civil district or territory.	Area on 1st April 1877.		Added during the year.		Excluded or transferred to other heads.		Total on 31st March 1878.		Remarks.
		Square miles	Acres.	Square miles.	Acres.	Square miles.	Acres.	Square miles.	Acres.	
AJMERE ...	Mhowa and Madar hill . . .	4	252	...	...	...	70	4	182	The area entered in the 1st column is in some cases the result of topographical survey and in some cases of settlement survey. It has been decided to regard the settlement survey as correct. A portion of the area entered in column 3 has been shewn in statement of plantations, and the balance brings up the area to settlement surveys. No fresh notifications were issued.
	Nagpahar	4	119	...	...	...	41	4	78	
	Tarragarh valleys	1	403	...	...	...	81	1	322	
	Srinagar and Bir	5	481	...	...	...	109	5	372	
	Rajaosi	1	620	...	...	...	...	1	620	
	Total .	17	595	...	...	...	301	17	294	
MHAIRWARRA ...	Chang	3	421	...	...	...	14	3	407	
	Hattun and Sheopura . . .	3	...	...	...	...	28	2	612	
	Biliawas and Tarragarh . . .	4	612	...	...	...	9	4	603	
	Todgarh and Barakhan . . .	62	383	...	...	...	60	62	323	
	Delwara and Chang Birs. . .	...	...	...	171	...	...	...	171	
	Borwar and Kotra	6	83	...	...	...	...	6	83	
	Anspahar	2	186	...	...	...	...	2	186	
	Total .	82	405	...	171	...	111	82	465	
	GRAND TOTAL .	100	360	...	171	...	412	100	119	

Form No. 46.

FOREST DEPARTMENT, AJMERE AND MHAIRWARRA.

Area of plantations, 1877-78.

Division.	Name of Plantation.	On 1st April 1877.		During 1877.		On 31st March 1878.		Remarks.
		Area.	Total cost	Area added	Cost.	Total area	Total cost.	
		Acres.	Rs. A. P	Acres.	Rs. A. P	Acres	Rs A. P	
	Tracts taken up by the Regulation.							
Ajmere	Mhowa and Madar hill	70	4,640 3 9	..	306 4 8	70	4,946 8 5	In the beginning, experimental planting work was undertaken in the Ajmere district on a large scale, and the expenditure incurred on this account has been included, as no separate account was kept.
	Nagpahar	22	4,773 1 2	...	336 7 6	22	5,109 8 8	
	Tarragah valleys	54	4,341 13 8	...	444 11 0	54	4,786 8 8	
	Srinagar and Bir	3	190 3 6	...	153 5 3	3	343 8 9	
	Total	149	13,945 6 1	..	1,240 12 5	149	15,186 2 6	
Mhairwarra	Chang tract	14	564 12 9	...	104 13 6	14	669 10 3	In Mhairwarra, planting work was undertaken on a latter occasion, and the work of digging pits, &c., was generally done by the existing establishment.
	Hattun and Sheopura	28	540 7 0	...	84 0 6	28	624 7 6	
	Biliawas and Tarragarh	9	331 9 3	...	72 2 6	9	403 11 9	
	Todgarh and Barakhan	45	189 15 1	...	141 2 9	45	331 1 10	
	Delwara and Chang Birs	64	192 15 0	...	73 9 11	64	266 8 11	
	Total	160	1,819 11 1	..	475 13 2	160	2,295 8 3	
	Grand Total	309	15,765 1 2	...	1,716 9 7	309	17,481 10 9	
	Tracts not taken up by the Regulation.							
Ajmere	Shikast Masjid	6	420 4 5	...	65 7 5	6	485 11 10	Nazúl patch.
	Total Plantation	315	16,185 5 7	...	1,782 1 0	315	17,967 6 7	
	Nurseries.							
Ajmere	Main nursery	1	1,467 15 4	...	474 14 6	1	1,942 13 10	
	Shahjahani nursery	11	808 14 11	...		11	808 14 11	
	Bibi Chihla "	9	80 5 5	...		9	80 5 5	
Mhairwarra	Beawar nursery	32	2,366 13 9	...	531 14 9	32	2,898 12 6	Includes cost and area of a portion planted with trees. No separate account was kept.
	Total	53	4,724 1 5	...	1,006 13 3	53	5,730 14 8	

Form No. 47

FOREST DEPARTMENT, AJMERE AND MHAIRWARRA.

Area of forest tracts protected from fire during the dry season of 1878 (to accompany report for 1877-78).

Division.	Forest tracts.	Up to 15th June 1877.		During dry season of 1878				Total cost up to 30th June 1878	Year when protection commenced.
		Area actually protected	Total cost.	Area attempted to be protected.	Failures	Actually protected	Amount expended		
		Acres.	Rs A P	Acres	Acres.	Acres	Rs A P.	Rs. A P	
Ajmere and Mhairwarra	Tarragarh valleys	300	152 8 1	.	...	...	..	152 8 1	1874
	Bihawas	3,172	305 8 0	3,172	.	3,172	33 10 0	339 2 0	1874
	Todgarh	40,048	1,517 9 0	40,048	..	40,048	151 5 4	1,668 14 4	1874
	Anspahar	..	.	1,466	.	1,466	32 10 0	32 10 0	1877
	Total	43,520	1,975 9 1	44,686	.	44,686	217 9 4	2,193 2 5	
							Charged in previous years	1,897 9 1	
							,, 1877 78	229 12 0	
							,, 1878 79	65 13 4	
								2,193 2 5	

Form No 48

FOREST DEPARTMENT, AJMERE AND MHAIRWARRA.

Prosecutions for breaches of forest rules, 1877.

Forest division and civil district.	Injury to forests by fire		Unauthorised felling or appropriation of wood and minor forest produce		Grazing without permission or in tracts in which grazing is prohibited		Other offences.		Total			
									Prosecutions		Convictions	
	Cases.	Persons	Cases	Persons.	Cases	Persons.	Cases	Persons.	Cases.	Persons	Cases	Persons
Ajmere	...	...	84	257	8	37	8	20	100	314	96	285
Mhairwarra	...	.	9	24	19	93	4	37	32	154	28	68
Total	...	...	93	281	27	130	12	57	132	468	124	353

Form No. 49.

FOREST DEPARTMENT, AJMERE AND MHAIRWARRA.

Summary of Revenue of the different Divisions, 1877-78.

Budget Heads.	Ajmere.	Mhairwarra.	Total.
RECEIPTS.	Rs. A P.	Rs. A P.	Rs. A. P.
I.—Timber and other produce removed from the forests by Government Agency:—			
(a). Timber	...	...	...
(b). Firewood and charcoal	...	157 0 0	157 0 0
(c). Bamboos	...	...	...
(d). Sandalwood	...	...	...
(e). Grass and other minor produce	...	...	...
II.—Timber and other produce removed from the forests by consumers or purchasers:—			
(a). Timber	...	...	...
(b). Firewood and charcoal	45 5 6	...	45 5 6
(c). Bamboos	...	...	...
(d). Grazing and fodder grass	1,210 13 11	15 11 6	1,226 9 5
(e). Other minor produce	11 5 3	95 1 0	106 6 3
III.—Confiscated drift and waif wood	0 10 9	...	0 10 9
IV.—Revenue from forests not managed by Government:—			
(a). Duty on foreign timber and other forest produce	...	...	...
(b). Revenue from shared and private forests	...	...	...
V.—Miscellaneous:—			
(a). Fines and forfeitures	1,272 14 8	189 6 0	1,462 4 8
(b). Refunds	...	...	...
(c). Other sources	1 8 0	2 10 9	4 2 9
Total Receipts	2,542 10 1	459 13 3	3,002 7 4

Summary of Expenditure of the different Divisions, 1877-78.

Budget Heads.	Ajmere	Mhairwarra.	General.	Total.
A.—CONSERVANCY AND WORKS.	Rs. A. P	Rs. A. P.	Rs. A. P.	Rs A. P.
I.—Timber and other produce removed from the forests by Government Agency:—				
(a). Timber	...	...	...	...
(b). Firewood and charcoal	...	136 0	...	136 8 0
(c). Bamboos	...	...	...	...
(d). Sandalwood	...	...	...	...
(e). Grass and other minor produce	...	30 10 0	...	30 10 0
II.—Timber and other produce removed from the forests by consumers or purchasers	...	...	...	...
III.—Confiscated drift and waif wood	...	...	...	...
IV.—Revenue from forests not managed by Government:—				
(a). Duty on foreign timber and other forest produce	...	...	...	...
(b). Revenue from shared and private forests	...	...	...	...
V.—Rent of leased forests and payments to share-holders in forests managed by Government	.	...	..	...
Carried over		167 2 0	...	167 2 0

Summary of Expenditure of the different Divisions, 1877-78,—continued.

Budget Heads.	Ajmere.	Mhairwarra.	General.	Total.
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs A P.
Brought forward	...	167 2 0	...	167 2 0
A.—CONSERVANCY AND WORKS—*contd.*				
VI.—Live and dead-stock:—				
(a). Purchase of cattle	...	...	...	...
(b). Feed and keep of cattle	30 2 3	20 11 3	...	50 13 6
(c). Plant, tools, and instruments	4 9 6	64 11 6	...	69 5 0
VII.—Communications and buildings:—				
(a). Roads and bridges	45 12 0	174 7 6	...	220 3 6
(b). Buildings	494 15 0	241 6 3	...	736 5 3
(c). Other works	...	...	...	...
VIII.—Demarcation, improvement, and extension of forests:—				
(a) Demarcation	...	3 0 0	...	3 0 0
(b). Compensation for land and rights	...	...	...	...
(c). Surveys and working-plans	...	...	...	...
(d). Plantations	1,875 5 5	989 13 2	64 0 0	2,929 2 7
(e) Protection from fire	...	229 12 0	...	229 12 0
(f). Other works	2,091 14 11	429 4 6	...	2,521 3 5
IX.—Miscellaneous:—				
(a). Refunds	...	...	...	...
(b). Law charges	...	...	...	...
(c). Other charges	...	...	34 6 6	34 6 6
Total A.—Conservancy and Works	4,542 11 1	2,320 4 2	98 6 6	6,961 5 9
B.—ESTABLISHMENTS.				
I.—Salaries—				
(a). Conservators	...	...	...	...
(b). Superior officers	...	...	1,950 0 0	1,950 0 0
(c). Subordinate forest and depôt establishments	1,232 0 7	1,765 14 5	285 0 0	3,282 15 0
(d). Office establishments	...	...	1,596 0 0	1,596 0 0
(e). Deputation and special allowances	...	...	...	...
II.—Travelling allowances—				
(a). Conservators	...	...	...	...
(b). Superior officers	...	...	568 2 0	568 2 0
(c). Subordinate forest and depôt establishments	...	...	...	...
(d). Office establishments	...	...	126 0 7	126 0 7
III.—Contingencies:—				
(a). Stationery	...	...	25 15 3	25 15 3
(b). Carriage of tents and records	...	...	262 3 11	262 3 11
(c). Pay of police guards	...	...	...	...
(d). Sundries	...	...	122 8 8	122 8 8
(e). Official postage	..	...	30 14 0	30 14 0
Total B.—Establishments	1,232 0 7	1,765 14 5	4,966 12 5	7,964 11 5
GRAND TOTAL OF EXPENDITURE	5,774 11 8	4,086 2 7	5,065 2 11	14,926 1 2

Form No. 50.

FOREST DEPARTMENT, AJMERE AND MHAIRWARRA.

Account Current for the year 1877-78.

Dr.

	Rs. A. P.	Rs. A. P.
To cash balance on 1st April 1877	...	...
To revenue received in cash	3,002 7 4	
To remittances from Ajmere treasury	14,960 10 4	
To advances recoverable	215 4 0	
		18,178 5 8
Total		18,178 5

Cr.

	Rs. A. P.	Rs. A. P.
By expenditure under A	6,961 5 9	
By " " B	7,964 11 5	
By revenue remittances to Ajmere Treasury	3,002 7 4	
By advances recoverable	249 13 2	
		18,178 5 8
Total		18,178 5 8

Form No. 51.

FOREST DEPARTMENT, AJMERE AND MHAIRWARRA.

Statement of Outstandings and Liabilities on account of Disbursers, 1877-78.

Division.	Department Debtor.			Department Creditor			Balance due	
	At commencement of year.	Recoveries in cash and value of supplies and work done during the year.	At close of year.	At commencement of year.	Payments made during year	At close of year.	To Department (outstandings).	By Department (liabilities).
	Rs. A. P	Rs A P	Rs. A P	Rs A P	Rs A P	Rs. A P.	Rs. A. P.	Rs A. P.
Ajmere and Mhairwarra . .	35 7 8	215 4 0	250 11 8	628 7 4	240 13 2	878 4 6	700 0 0	72 7 2
Total ...	35 7 8	215 4 0	250 11 8	628 7 4	240 13 2	878 4 6	700 0 0	74 7 2

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